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| 09/939,722 | 08/28/2001 | Hironobu Kitajima | 1619.1014 | 4071 |
| 21171 | 7590 | 10/31/2006 | EXAMINER | |
| STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | OUELLETTE, JONATHAN P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3629 | |

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|---|--|
| Office Action Summary | Application No. 09/939,722 | Applicant(s) KITAJIMA, HIRONOBU | |
| | Examiner Jonathan Ouellette | Art Unit 3629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006 and 21 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 11-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 11-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. The Request filed on 8/21/2006 for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/939,722 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. Claims 1-8, and 10 have been cancelled, and Claims 14-29 have been added; therefore, Claims 9 and 11-29 are now pending in application 09/918,092.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. **Claims 9 and 11-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLorme et al. (US 5,948,040) in view of Bamforth et al. (US 6,330,617 B1).**
5. As per **independent Claims 9**, DeLorme discloses a service brokering method (C31 L42-51, brokering) for providing a complex service (travel plan) integrating a plurality of elementary services (service providers) realized on a system which comprises a user software agent

computer used by a user agent (User), a brokering software agent computer used by a brokering agent connected to the user software agent computer via a network and providing a complex service integrating a plurality of elementary services realized on a computer to the user agent (Trips system), and a plurality of elementary service agents connected by a computer to the brokering software agent computer via a network and each of the plurality of elementary service agents providing an own elementary service realized on its own computer and provided independently from each other (Providers), the method comprising: storing, by the brokering agent storing for each elementary service, service description information comprising a combination of identification information of an elementary service agent which provides the elementary service (Provider Listing), declarative description information on information needed to realize the elementary services (Fig. 1C, who, what, where - provided by user), and declarative description information on processing results of the elementary services (Fig. 1C, user information used to obtain necessary tickets, reservations, etc.); the declarative description information comprising a declarative description, and a statement of properties of an object of description (Ticket number, hotel room, plane seat number); upon receipt of a request message for the complex service from the user agent (Fig.2, Input/Output; C7 L22-24, Travel Route, who/what/where entered by retail user); decomposing the complex service into elementary services (C8 L33-48, TRIPS calculates, delineates, and displays travel route) using the service description information, by the brokering agent, and generating a service request plan comprising strings of combinations of at least elementary service information needed to realize the complex service, and identification information of the elementary service agent which provides the elementary

Art Unit: 3629

service; and requesting elementary service to the plurality of the elementary service agents based on the generated request plan by the brokering agent, and compiling the processing results so that the processing results of the complex service are prepared and notified to the requesting user agent (C7 L28-65, C8 L33-48, TRIPS generates full itinerary integrating information from outside providers).

6. DeLorme does disclose the transfer of data with travel related service providers (elementary service agent) (C10 L19-33). However, Trip fails to expressly disclose wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary service agents converting data that is input to, and output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface.
7. However, the use of data switches to convert ingoing and outgoing data into a preferred format was well known at the time the invention was made, as is made clear by the prior art of Bamforth (C3-C4).
8. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary service agents converting data that is input to, and output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface, as disclosed by Bamforth in the system disclosed by DeLorme for the advantage of providing a method/system for providing travel-related information with the ability to increase system effectiveness and efficiency by incorporating multiple data formats from data feeds.

9. As per **independent Claim 11**, DeLorme discloses a computer readable storage medium recording a service brokering program for realizing a brokering agent (Trips system on pre-recorded medium) providing a complex service integrating a plurality of elementary services on a computer (Trips system gathers requests from users and gathers integrated results from providers to provide user with complete travel plan), the brokering agent (Trips system) being connected to a user software agent computer used by a user agent, a brokering software agent computer used by brokering agent connected to the user software agent computer via a network and providing a complex service integrating a plurality of elementary services realized on a computer to the user agent, and a plurality of elementary service agents (third party providers) connected by a computer to the brokering software agent computer via a network (Internet), and each of the plurality of elementary service agents providing an own elementary service realized on its own computer and provided independently from each other (third party systems – hotels, airports, event tickets), the program causing the computer of the brokering agent to execute: receiving a request message for the complex service from the user agent (Fig.1C, retail user answers “who/ what/ where?”; C7 L22-35, C8 L33-37, receiving user defined travel route); and upon receipt of the request message, decomposing the complex service into the elementary services, by the brokering agent (C8 L33-48, TRIPS calculates, delineates, and displays travel route), using service description information comprising a combination of identification information of an elementary service agent which provides the elementary service, declarative description information on information needed to realize the elementary services, and declarative description information on the processing results of the elementary services that are stored in advance for each elementary service (C7

L22-24, Travel Route, who/what/where entered by retail user), the declarative description information comprising: a declarative description, and a statement of properties of an object of description, and generating, by the brokering agent, an elementary service request plan comprising strings of combinations of at least elementary service request information needed to realize the complex service, and identification information of the elementary service entities (C7 L28-65, C8 L33-48, TRIPS generates full itinerary); and requesting elementary services to the plurality of elementary service agents based on the generated request plan by the brokering agent, and compiling the processing results so that the processing results of the complex service are prepared and notified to the requesting user agent (C7 L28-65, C8 L33-48, TRIPS generates full itinerary).

10. DeLorme does disclose the transfer of data with travel related service providers (elementary service agent) (C10 L19-33). However, Trip fails to expressly disclose wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary service agents converting data that is input to, and output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface.
11. However, the use of data switches to convert ingoing and outgoing data into a preferred format was well known at the time the invention was made, as is made clear by the prior art of Bamforth (C3-C4).
12. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary

service agents converting data that is input to, and output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface, as disclosed by Bamforth in the system disclosed by DeLorme for the advantage of providing a method/system for providing travel-related information with the ability to increase system effectiveness and efficiency by incorporating multiple data formats from data feeds.

13. As per **independent Claim 12**, DeLorme discloses a service integration system comprising: a user software agent computer used by a user agent (Fig.1A, Fig.2, retail user system); a brokering software agent computer used by a brokering agent (Fig.2, TRIPS system; C31 L42-51, brokering) connected to the user software agent computer via a network (Internet) and providing a complex service (Travel planning) integrating a plurality of elementary services realized on a computer to the user agent (Trips system gathers requests from users and gathers integrated results from providers to provide user with complete travel plan); and a plurality of elementary service agents (Fig.2, third-party providers), connected to the brokering software agent computer via a network (Internet), and each of the plurality of elementary service agents providing an own elementary service realized on its own computer and provided independently from each other (third party systems – hotels, airports, event tickets), the brokering software agent computer comprising; means for storing service description information comprising a combination of identification information of an elementary service agent which provides the elementary service (provider listings), declarative description information needed to realize the elementary services (Fig.1C, retail user answers “who/ what/ where?”; C7 L22-35, C8 L33-37, receiving user defined travel route), and declarative description information on the processing results of the elementary

services (user information used to obtain necessary tickets, reservations, etc.) for each of the plurality of elementary services, the declarative description information comprising a declarative description and a statement of properties of an object of description has (Ticket number, hotel room, plane seat number), means for transmitting and receiving messages (Fig.2, Input/Output), and means for upon receipt of a request message for the complex service from the user agent (Fig.1C, retail user answers “who/ what/ where?”; C7 L22-35, C8 L33-37, receiving user defined travel route), decomposing the complex service into the elementary services using the service description information, by the brokering agent, (C8 L33-48, TRIPS calculates, delineates, and displays travel route), and generating an elementary service request plan comprising strings of combinations of at least elementary service request information needed to realize the complex service, and the identification information of the elementary service agent which provides the elementary service, and means for requesting elementary services to the plurality of the elementary service agents based on the generated request plan by the brokering agent (C31 L42-51, brokering), and compiling the processing results so that the processing results of the complex service are prepared and notified to the requesting user agent (C7 L28-65, C8 L33-48, TRIPS generates full itinerary).

14. DeLorme does disclose the transfer of data with travel related service providers (elementary service agent) (C10 L19-33). However, Trip fails to expressly disclose wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary service agents converting data that is input to, and

output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface.

15. However, the use of data switches to convert ingoing and outgoing data into a preferred format was well known at the time the invention was made, as is made clear by the prior art of Bamforth (C3-C4).
16. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary service agents converting data that is input to, and output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface, as disclosed by Bamforth in the system disclosed by DeLorme for the advantage of providing a method/system for providing travel-related information with the ability to increase system effectiveness and efficiency by incorporating multiple data formats from data feeds.
17. As per Claim 14, DeLorme and Bamforth disclose wherein the brokering software agent computer transmits the request plan in response to a request for the request plan from the user agent (DeLorme: C7 L28-65, C8 L33-48, TRIPS creates full itinerary; C31 L42-51, brokering).
18. As per Claim 15, DeLorme and Bamforth disclose wherein the brokering software agent computer further comprises means for receiving from the user agent service description information comprising a combination of identification information of the elementary service agent which provides the elementary service, declarative description information in the information needed to realize the elementary service thereof, and declarative description

information in the processing results of the elementary service, and means for storing the service description information into means for dynamically registering the service description information (DeLorme: C7 L22-35, C8 L33-37, receiving user defined travel route).

19. As per Claim 16, DeLorme and Bamforth disclose wherein the declarative description information on information needed to realize the elementary service and the declarative description information on the processing results of the elementary service are expressed by classes or objects of an object-oriented language (DeLorme: Fig.1C; C8 L33-62, TRIPS generated travel itinerary, C8 L33-62).
20. As per Claim 17, DeLorme and Bamforth disclose wherein the brokering software agent computer further comprises ontology storing means for storing definition information on vocabularies used in the declarative description information on information needed to realize the elementary service and the declaration description information on the processing results of the elementary service (DeLorme: Fig. 1C, C23 L30-37, retail user queries Topical subsystem/databases for travel related topics, subject matter, and contents – vocabularies would be entered by user to request descriptive info).
21. As per Claim 18, DeLorme and Bamforth disclose wherein the means for decomposing decomposes the complex service into the plurality of elementary service using the service description information and the definition information stored in the ontology storing means (DeLorme: Trips systems determines where to obtain travel information by user input information).
22. As per Claim 19, DeLorme and Bamforth disclose wherein the means for generating the elementary service request plan prepares the elementary service request plan taking into

Art Unit: 3629

account meta-information describing the nature of the elementary service agent which provides the elementary service itself, in addition to the declarative description information on information needed to realize the elementary service and the declarative description information on the processing results of the elementary information (DeLorme: C8 L33-48, itinerary determines by quickest route, shortest route, seat availability, pricing, and departure times).

23. As per Claim 20, DeLorme and Bamforth disclose wherein the meta-information user for preparing the elementary service request plan is information on users' access rights to elementary services, information on the line speed or processing speed of elementary services, or information on the user preference of the elementary services (DeLorme: C8 L33-48).
24. As per Claim 21, DeLorme and Bamforth disclose wherein the brokering agent receives a reply message from any of the plurality of elementary service agents, judges whether generation of a new request plan is needed in accordance with the reply message, and generates a new request plan including a change in the previously generated request plan when generation of the new request plan is needed (DeLorme: Trips systems receives information from providers and implements it into travel planning).
25. As per Claim 22, DeLorme and Bamforth disclose wherein each of the user software agent computer used by the user agent, the brokering software agent computer used by the brokering agent, and the plurality of elementary service agents connected by the computer is an interactive agent.

26. As per Claim 23, DeLorme and Bamforth disclose wherein each of the interactive agents uses a frame-type data structure, and the frame is a data structure having a predetermined syntax including a slot name and slot value corresponding thereto in each line, and each of the frames is defined in advance for its service (equivalent technology to system described by DeLorme).
27. As per Claim 24, DeLorme and Bamforth disclose wherein the frame of the request message for the complex service is filled with their slot values (equivalent technology to system described by DeLorme).
28. As per Claim 25, DeLorme and Bamforth disclose wherein a plurality of frame pairs is stored as the service description information, and each of the plurality of frame pairs expresses a requirement and result of a service offered by each of the plurality of elementary service agents (equivalent technology to system described by DeLorme).
29. As per Claim 26, DeLorme and Bamforth disclose wherein the complex service is described in terms of the frames including the results of the service offered by the plurality of elementary service agents (equivalent technology to system described by DeLorme).
30. As per Claim 27, DeLorme and Bamforth disclose wherein the brokering agent generates the request plan based on the plurality of frame pairs and the complex service is described in terms of the frames (equivalent technology to system described by DeLorme).
31. As per Claim 28, DeLorme and Bamforth disclose wherein the request plan comprises strings of a plurality of elementary service requests, and each of the plurality of elementary service requests comprises a pair of a name of a requesting agent and a request message (DeLorme: Trips system request data from Providers listed).

32. As per Claim 29, DeLorme and Bamforth disclose wherein the brokering agent sends a message to each of elementary service agents along with the prepared request plan, assembles a from a based on a message returned as a reply, and returns the frame to the user agent (DeLorme: equivalent communication technology to system described by DeLorme).
33. As per **independent Claim 13**, DeLorme discloses a service integration system comprising: a user software agent computer used by the user agent (Fig.1A, Fig.2, retail user system); a brokering software agent computer used by a brokering agent (Fig.2, TRIPS system; C31 L42-51, brokering) connected to the user software agent computer via a network (Internet) and providing a complex service integrating a plurality of elementary services realized on a computer to the user agent (Trips system gathers requests from users and gathers integrated results from providers to provide user with complete travel plan); and a plurality of elementary service agents (Fig.2, Provider(s)), connected to the brokering software agent computer (Trips system) via a network (Internet), and each of the plurality of elementary service agents providing an own elementary service realized on its own computer and provided independently from each other (third party systems – hotels, airports, event tickets), the brokering software agent computer comprising; means for storing service description information comprising a combination of identification information of an elementary service agent which provides the elementary service (Provider listings), declarative description information needed to realize the elementary services (Fig.1C, retail user answers “who/ what/ where?”; C7 L22-35, C8 L33-37, receiving user defined travel route), and declarative description information on the processing results of the elementary services (user information used to obtain necessary tickets, reservations, etc.) for each of the plurality of elementary

Art Unit: 3629

services, the declarative description information comprising a declarative description and a statement of properties the object of description has (Ticket number, hotel room, plane seat number); means for transmitting and receiving messages (Fig.2, Input/Output), and means for upon receipt of a request message for the complex service from the user agent (C7 L22-24, Travel Route, who/what/where entered by retail user), decomposing the complex service into the elementary services using the service description information, by the brokering agent, (C8 L33-48, TRIPS calculates, delineates, and displays travel route), and generating an elementary service request plan comprising strings of combinations of at least elementary service request information needed to realize the complex service, and the identification information of the elementary service agent which provides the elementary service, and means for notifying the generated request plan to the requesting user agent (C7 L28-65, C8 L33-48, TRIPS generates full itinerary), the user agent comprising means for requesting elementary services to the elementary service agents based on the request plan generated by the brokering agent (C14 L27-35, C18 L25-30).

34. DeLorme does disclose the transfer of data with travel related service providers (elementary service agent) (C10 L19-33). However, Trip fails to expressly disclose wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary service agents converting data that is input to, and output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface.

Art Unit: 3629

35. However, the use of data switches to convert ingoing and outgoing data into a preferred format was well known at the time the invention was made, as is made clear by the prior art of Bamforth (C3-C4).
36. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included wherein upon one of the plurality of elementary service agents having a communications format different than other of the plurality of the elementary service agents converting data that is input to, and output from, the one of the plurality of the elementary service agents so as to allow use of a uniform input/output interface, as disclosed by Bamforth in the system disclosed by DeLorme for the advantage of providing a method/system for providing travel-related information with the ability to increase system effectiveness and efficiency by incorporating multiple data formats from data feeds.

Response to Arguments

37. Applicant's arguments filed 7/24/2006, with respect to Claims 9 and 11-29, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Ouellette whose telephone number is (571) 272-6807. The examiner can normally be reached on Monday through Thursday, 8am - 5:00pm.
39. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (571) 272-6812. The fax phone numbers for the organization

Art Unit: 3629

where this application or proceeding is assigned (571) 273-8300 for all official communications.

40. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Office of Initial Patent Examination whose telephone number is (703) 308-1202.

jo

October 26, 2006

JONATHAN OUELLETTE
PRIMARY EXAMINER
TECHNOLOGY CENTER 3600

